Workplan: Mercury Workgroup

Introduction

Mercury is a toxic metal that has high bioconcentration and bioaccumulation rates when in the form of methylmercury. The most common organic mercury compound in the environment is methylmercury, which is the predominant mercury species found in fish tissue. Mercury is the major reason for the issuance of fish consumption advisories in Indiana.

Method 1631, Revison E is a new mercury analytical method approved by U.S.EPA in October 2002, that can measure the concentration of mercury at a level below Indiana's existing aquatic life, human health, and wildlife water quality criteria. Prior to the availability of this method, laboratory analysis could only measure mercury at a level well above these water quality criteria.

Based on fish tissue and in-stream water quality sampling, the concentration of mercury that exists in many of Indiana's surface waters exceeds existing water quality criteria. Additionally, all of Indiana's surface waters are under fish consumption advisories due to mercury. A fish consumption advisory for mercury is based on the Food and Drug Administration's (FDA) action level of 1 mg/kg. It is important to note that not every fish in every surface water body is collected and analyzed for mercury. A fish consumption advisory is based on a statistically significant sample population of fish collected throughout the state that meets or exceeds this FDA action level.

Prior to the existence of the EPA's Method 1631, OWQ was unable to assess compliance with very low-level mercury limitations because the existing analytical methods were not capable of detection to the level of the limitations. Now that the new mercury method is available, OWQ is working to devise a permitting approach that will assist in reducing mercury loadings.

The Problem

Information available within Indiana and nationally suggests that a significant number of wastewater discharges may require water quality-based effluent limits (WQBELs) for mercury. Information obtained by IDEM suggests that mercury pollution minimization efforts may have a certain amount of effectiveness but may not be enough to meet the most stringent mercury WQBELs. It also appears that the number of facilities that will need mercury limitations will increase significantly. For example, there are approximately 30 facilities with NPDES permits that contain mercury limitations or monitoring requirements. It is possible that between 180 to 1,300 facilities may eventually need mercury limitations as more effluent data becomes available. OWQ believes that many of these facilities will not be able to comply with these new mercury limits. The compliance problem results from the lack of economically viable, end-of-pipe, treatment options and the ubiquitousness of mercury in the environment.

One Proposed Approach

One legal mechanism available to NPDES permit holders that could provide some relief from non-compliance with mercury limits is to be granted a variance from the mercury WQBEL. However, the

variance process can be resource and time intensive for the facility, the interested public, and OWQ. Processing hundreds of individual mercury variances would detract from other important work required of permit holders, the public, and IDEM. Therefore, the proposed approach is to investigate options including rulemaking to develop a streamlined process for obtaining a mercury "variance. If a variance process were to be developed, it would, at a minimum, require dischargers to undertake all practical efforts to minimize or prevent mercury pollution from being discharged from their facilities. EPA's Region 5 has been receptive to this approach.

If the result of the workgroup process described by this workplan is to pursue rulemaking, then revision of existing rules at 327 IAC 2-1-8.8 and 327 IAC 5-3-4.1 could occur or a new rule could be developed for a statewide mercury variance that includes pollution minimization requirements to facilitate compliance for affected facilities and to foster mercury reduction efforts.

Previous Rulemaking Related Efforts

Under an earlier review of water quality standards (Triennial Review), IDEM drafted a new rule variance from a water quality criterion that included provisions for a variance specific to mercury. In February 1999, that draft rule, as part of the entire draft of the Triennial Review, was published for comment in the Indiana Register. The entire Triennial Review rulemaking was withdrawn in May 2001. Nonetheless, the draft variance rule, (327 IAC 2-1.6) developed through that process, could be used as the starting point ~~to~~ of this current effort.

In the published draft rule, the mercury variance process was envisioned to require the permittee to submit to the commissioner an application for a variance that includes the following elements:

- A certification that the discharger intends to be subject to the terms of the statewide variance.
- A description of measures taken to date for mercury reduction or elimination.
- A plan of study for the identification and evaluation of potential mercury sources and potential methods for reducing and/or eliminating mercury from the permittee's effluent (i.e. pollution minimization).
- An explanation of the permittee's basis for concluding that there are no readily available means of complying with the mercury WQBEL without construction of end-of-pipe controls.

Due to the high priority placed on resolving the permit writing and dischargers' noncompliance situations concerning mercury in effluents, a new rulemaking entitled "Development of a New Rule Concerning Statewide Mercury Variance" has been initiated with the publication of a first notice of comment period in the June 1, 2002, Indiana Register. Six comment letters were received during the thirty day comment period.

Project Objectives

The objectives of this project are: 1) to develop the appropriate policy for implementing mercury requirements in NPDES permits; and 2) to develop, if deemed appropriate, according to the developed policy, an effective mercury variance rule as soon as possible. Each team member should have a clear role in helping to meet project objectives.

Project Team

Initially, the following individuals shall comprise the project team. However, as the project proceeds, additional team members may be added (in consultation with the individuals below and/or the Triennial Review Steering Committee) to provide all necessary areas of expertise to the workgroup. The following team members are expected to attend all workgroup and Triennial Review Steering Committee meetings to ensure continuity of the discussions and that the success of the previously identified project objectives are achieved in a timely manner. In addition, workgroup members are asked to commit (time permitting) to participation in all other public outreach forums related to the Triennial Review process as identified by the Triennial Review Steering Committee.

Paula Smith (317-233-1210) psmith@dem.state.in.us IDEM Workgroup Facilitator

Steve Roush (317-232-8706) sroush@dem.state.in.us IDEM Technical Advisor

John Donellan (317-234-0865) jdonnell@dem.state.in.us IDEM Assistant Workgroup Facilitator

Larry Wu (317-234-1805) lwu@dem.state.in.us IDEM Public Participation Coordinator

MaryAnn Stevens (317-232-8635) mstevens@dem.state.in IDEM rulewriter

John Chavez (317-327-2237) jchavez@indygov.org Local Government Representative

Charlotte Read (219-879-3937) char@savedunes.org Public Interest Sector Representative

Paula Yeager (317-571-1223) iwf@indy.net Public Interest Sector Representative

Tim Lohner (614-223-1255) twlohner@aep.com Industry Representative

John Fekete (219-399-4191) John.Fekete@ispat.com representing the IN Chamber of Commerce

Tom Neltner (317-442-3973) neltner@in.net representing Improving Kids' Environment

Kevin Hoge (219-647-5242) kehoge@nisource.com Private Interest Sector Representative (Nisource)

Eric Fry (812-424-9000) efry@bbcoal.com Private Interest Sector Representative (B B Coal)

Marty Risch (317-290-3333) mrrisch@usgs.gov USGS Water Quality Data Representative

David Pfeifer (312-353-9024) Pfeifer.david@epamail.epa.gov EPA Representative

Morris Beaton (312-353-0850) Beaton.Morris@epamail.epa.gov, EPA Representative

Matt Gluckman (312-886-6089) Gluckman.matthew@epa.gov EPA Representative

US Fish and Wildlife Service (participation requested, but not confirmed)

Interested Parties to the Workgroup: Cyndi Wagner of Wittman Hydro Planning & Associates, Robin Feller of JRM Consulting, Rebecca Harvey and Linda Holst both of EPA, Robin Garibay of Advent Consultants, and Meredith Kostek of IDEM Office of Legal Counsel

In addition, the workgroup will invite "technical advisors" for their short-term participation, as needed. A roster of potential "technical advisors" will be maintained by the workgroup. Finally, other IDEM employees will participate in the workgroup as necessary.

Communications

Open communication and sharing of information among project team members is encouraged in order to facilitate a successful conclusion to this project. Email is an effective way to exchange information and resolve issues involving several project team members. Team members should copy the IDEM workgroup facilitator on all email messages and other correspondence that are intended to be part of the permanent record of this project. The IDEM facilitator is responsible for forwarding and/or copying all communications and documents to the IDEM Chief of the Rules Section who will maintain a file of all written materials, including communications and Meeting Summaries, related to this project.

A recorder, designated on a rotational basis at the beginning of the third workgroup meeting, and thereafter, will record team meetings, and will prepare Meeting Summaries. These Meeting Summaries are not expected to contain a verbatim recording of the discussions but rather a summary of the main points discussed, agreements, disagreements, and action items. At the end of each meeting, the designated recorder shall go over his/her notes to clarify these items. The designated recorder shall submit a draft written meeting summary via email to all meeting participants within 2 working days after conclusion of the meeting. Meeting participants are expected to provide the recorder with comments, corrections, and clarifications to the draft meeting summaries within 2 working days after receipt of the draft summary. In turn, the designated meeting recorder shall submit a final meeting summary to the above team members within 8 working days after conclusion of the meeting.

Project Scope

Seven tasks have been identified for this project:

- Identification of team members, their roles and responsibilities, and determination and clarification of team operating guidelines (i.e. communications, decisions and resolving conflicts).
- Project Endorsement
- Identification of research background needs and preparation of background research reports
- Discussion of background research reports and development of document(s) of current understanding of background information
- Formulation of recommendation for appropriate policy and identification of key elements necessary for the next task, whether it be rulemaking or otherwise
- Development of rule language, if that is the chosen option
- Public outreach

The following describes the project work breakdown structure:

Co-Coordinators: Steve Roush and Paula Smith

Task 1- Identification of team members and determination of team operating guidelines needs

The goal of this task is to charter the most qualified team representing key public interest groups that responded to the First Notice published in the Indiana Register on June 1, 2002 and/or to outreach efforts via notification of the triennial effort from Tim Method on July 22, 2002.

Subtask 1.1 - Kick-off meeting. Task 1 includes a project kick-off meeting scheduled on September 11th with key stakeholder representatives Charlotte Read, Jon Mangles, John Chavez, Bob Johnston and Tim Lohner. During this meeting the project workplan was discussed and additional team members were identified.

Deliverables and Schedule:

- First Technical Workgroup meeting (kick-off meeting) (9-11-02) *ACCOMPLISHED ON TIME*
- Second version of workplan (9-19-02) *ACCOMPLISHED ON TIME*
- First version of operating guidelines (9-30-02) *ACCOMPLISHED ON TIME*

Subtask 1.2 - Redefinition of workplan and document operating guidelines. It is expected that a second version of the workplan and a first version of the operating guidelines will be provided to all team members prior to the second technical workgroup meeting, and that both documents will be further redefined upon participation of all the team members at the second meeting.

Deliverables and Schedule:

- 2nd Technical Workgroup meeting (10-3-02) *ACCOMPLISHED ON TIME*

Subtask 1.3 – Completion of workplan and operating guidelines. At the second meeting, all team members will discuss the workplan and operating guidelines for completion. Roles and responsibilities will be assigned to each team member. The IDEM workgroup facilitator will compile comments to prepare a final version of the workplan and the operating guidelines.

Deliverables and Schedule:

- Final draft version of workplan (11-7-02) *ACCOMPLISHED ON TIME*
- Final draft version of operating guidelines (11-7-02) *ACCOMPLISHED ON TIME*

Task 2- Project Endorsement

The goal of this task is to complete the assignment of task management roles, and to gain the team's approval and support of the project's process (as contained herewith) to keep the project moving forward.

Deliverables and Schedule:

- Assignment of TBA task management roles (below) and structured walkthrough of the final draft version of the workplan and operating guidelines (3rd Meeting) (11-21-02)
- Team members formal endorsement of the project's process – via the above walktrhough along with any handwritten changes to the documents and within the framework of team consensus (11-21-02)

Task 3- Identification of Background Research Needs and Preparation of Background Research Reports

The goal of this task is to clearly identify specific technical background to be reviewed by the team, such as review of water quality data, current cost of mercury removal at end-of-pipe, pollution minimization effectiveness, approaches taken by other states to a statewide mercury variance, current removal efficiency by conventional wastewater treatment technologies, previously drafted rule language, comments to first notice, alternative approach to a variance, etc. Team members will volunteer to research specific items and prepare summary reports of their literature research prior to the next meeting.

Deliverables and Schedule:

- 4th Technical Workgroup meeting (01-29-03)
- Assignments for background research to team members (01-29-03)
- Literature research summary reports to team members

Task 4- Discussion of background research reports and development of document of current understanding of background information)

The information collected in Task 3, above, will be discussed and used to develop a concise technical document that provides the team's current understanding of the identified background information.

Deliverables and Schedule:

- 5th Technical Workgroup meeting (all-day workshop)
- 6th Technical Workgroup meeting and development of document of current understanding of issue (all-day workshop)
- Document completion to Triennial Review Steering Committee

Task 5- Formulation of recommendation for appropriate policy and identification of key elements necessary for next task[1]

The team's current understanding of the background information will be used to formulate a recommendation for a policy to undertake in the next task (i.e. rulemaking for a statewide variance or any other preferred option)

Subtask 5.1 - Formulation of recommendation. During this subtask, the workgroup will make a recommendation to the Triennial Review Steering Committee for appropriate policy.

Deliverables and Schedule:

- 7th Technical Workgroup meeting (all-day workshop)
- 8th Technical Workgroup meeting (all-day workshop)
- Recommendation to Triennial Review Steering Committee

Subtask 5.2 - Identification of key elements necessary for next task. During this subtask, the workgroup will identify the key elements necessary to proceed with the next task.

Deliverables and Schedule:

- 9th Technical Workgroup meeting (all-day workshop)
- Document that identifies the key elements necessary for the next task

Task 6- Development of Rule Language (Assumes a statewide variance is the recommended policy)

The information collected in Tasks 4 and 5 will be used to develop rule language. The Task Manager in cooperation with the Public Participation Representative and IDEM rulewriting staff will prepare the first draft of the rule language, prior to the next meeting. The draft rule language will be circulated among team members and comments will be obtained during the next two workgroup meetings. During this time, the rule language will be presented and discussed with the Triennial Review Steering Group in parallel forums, and with the public, as necessary.

Deliverables and Schedule:

- 10th Technical Workgroup meetings (all-day workshop)
- 11th Technical Workgroup meeting (all-day workshop)

[1] Upon completion of Task 5, if another option different than a statewide variance has been identified and agreed on, this workplan will be modified to reflect either the intent to undertake rulemaking or chosen alternative.

Task 7- Public Outreach [2]

Subtask 7.1 - Second Notice. A second notice of this rulemaking will be published in the Indiana register-with a 60-day comment day period.

Deliverables and Schedule:

- Publication of a Second Notice with notification of date of Preliminary Adoption Public Hearing in the Indiana Register

Subtask 7.2 - Summary and Response to Second Notice Comments

Deliverables and Schedule:

- Summary and response to comments of the Second Notice
- Potential Public Meeting (TBA)

Subtask 7.3 – Preliminary Adoption Public Hearing and Preparation for Final Adoption

Deliverables and Schedule:

- Preliminary Adoption Public Hearing
- Publication of preliminarily adopted rule in the Indiana Register. A third comment period of at least 21 days is required if the preliminary adopted (proposed) rule is substantially different from the draft rule that was noticed during the second comment period.
- Package preparation due for Final Adoption Hearing with WPCB

Subtask 7.4 - Final Adoption Hearing and Final Publication in Indiana Register.

Deliverables and Schedule:

- Final Adoption Hearing with WPCB
- Promulgation packet due to Attorney General Office
- Promulgation packet due to Governor's Office.
- Publication of final rule in Indiana Register

[2] Target dates in Task 7 may change depending on public participation and WPCB requirements